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10/667,497	09/23/2003	Tsugio Okamoto	117273	1913
25944	7590	06/08/2007	EXAMINER	
OLIFF & BERRIDGE, PLC			TRAN, LY T	
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ALEXANDRIA, VA 22320			PAPER NUMBER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/667,497

Applicant(s)

OKAMOTO ET AL.

Examiner

Ly T. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 18 and 20-24 is/are allowed.
- 6) ☒ Claim(s) 1, 4-8, 10-13, 17 and 19 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/14/04; 1/16/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 4-8, 10, 11, 13, 17 and 19 rejected under 35 U.S.C. 102(e) as being anticipate by Nakashima et al (USPN 7,021,756).

With respect to claims 1 and 11, Nakashima discloses a belt conveying mechanism for an ink-jet recording apparatus, comprising:

- a plurality of rollers (Fig.3: element 7, 8);
- a conveyor belt (fig.3: element 10) for conveying a record medium (30) on a surface of the conveyor belt, the conveyor belt wrapped around the plurality of rollers (7, 8);
- a recessed portion (27-29) formed in the surface of the conveyor belt (10);
- an ink retaining portion (inside of 29) for retaining ink, the ink retaining portion disposed upstream in a traveling direction of the conveyor belt (10) and ranging from a bottom surface of the recessed portion to a rear surface of the conveyor belt;

- an ink absorber for absorbing the ink retained by the ink retaining portion from the rear surface of the conveyor belt by contacting with the ink retaining portion, the ink absorber disposed at the rear surface of the conveyor belt (Column 8: line 41-55).

With respect to claim 4, Nakashima discloses the rollers (7,8) are cut out at portions through which the ink retaining portion (29) passes at the time when the conveyor belt is traveling (fig.3).

With respect to claim 5, Nakashima discloses a guide member for supporting the conveyor belt, the guide member disposed in such a manner as to come into contact with at least part of the rear surface of the conveyor belt excluding portions through which the ink retaining portion passes at the time when the conveyor belt is traveling. (Fig.3: element 13, Column 5: line 1-2)

With respect to claim 6, Nakashima discloses the ink retaining portion (29) projects from the rear surface of the conveyor belt, and wherein the ink absorber is disposed in such a manner as to come into contact with only the projecting portion of the ink retaining portion (Fig.3).

With respect to claim 7, Nakashima discloses the ink absorber selectively assumes a position at which it is brought into contact with the rear surface of the conveyor belt or a position at which it is not brought into contact with the rear surface of the conveyor belt (Column 8: line 41-55).

With respect to claim 8, Nakashima discloses the ink absorber is made of felt (Column 8: line 45-48).

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With respect to claims 10 and 19, Nakashima discloses an ink-jet head for ejecting ink onto the record medium being conveyed by the conveyor belt of the belt conveyor (Column 3: line 60-67).

With respect to claim 13, Nakashima discloses the recessed portion is formed such that the ink moves towards both width ends of the conveyor belt in accompaniment with the traveling of the conveyor belt (Fig.3).

With respect to claim 17, Nakashima discloses the ink retainer selectively assumes a position at which it comes into contact with the conveyor belt or a position at which it does not come into contact with the conveyor belt (Fig.3).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakashima (USPN 7,021,756) in view of Nakashima et al (USPN 7,040,734).

Nakashima (USPN 7,021,756) fails to teach the bottom surface of the recessed portion is water-repellent.

Nakashima (USPN 7,040,734) teaches the bottom surface of the recessed portion is water-repellent (Column 4: line 56-60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the bottom surface of the recessed portion is water-repellent as taught by Nakashima. The motivation of doing so is to prevent the moisture absorb ti the belt.

***Allowable Subject Matter***

3. Claims 9, 18 and 20 are allowed.

- The primary reason for the allowance of claim 9 is the inclusion of the limitation of a belt conveying mechanism for an ink jet recording apparatus comprising a drive mechanism that moves the ink absorber based on the position of the ink retaining portion detected by the sensor and on the traveling speed of the conveyor belt. It is limitation found in each claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.
- The primary reason for the allowance of claim 18 is the inclusion of the limitation of a belt conveying mechanism for an ink jet recording apparatus comprising a drive mechanism that moves the ink retainer based on the position of the recessed portion detected by the sensor and on the traveling speed of the conveyor belt, such that the ink retainer comes into contact or does not come into contact with the conveyor belt. It is limitation found in each claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

- The primary reason for the allowance of claims 20-24 is the inclusion of the limitation of a belt conveying mechanism for an ink jet recording apparatus comprising an ink retainer for retaining the ink moved under the action of the gas delivered from the gas delivery member, the ink retainer disposed at the other width-direction end of the conveyor belt, in such a manner as to face the delivery portion of the gas delivery member in the gas delivery direction. It is limitation found in each claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

4. Claims 2, 3 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 2 is allowable over prior art of record because at least prior arts have not been discloses the ink retaining portion is non-water-repellent.

Claim 3 is allowable over prior art of record because at least prior arts have not been discloses the recessed portion has a "V" shape with its apex upstream in the traveling direction when viewed from the surface of the conveyor belt, and wherein the ink retaining portion is disposed at the apex.

Claims 14 and 15 are allowable over prior art of record because at least prior arts have not been discloses the recessed portion has a stepped portion upstream in the

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conveyor belt traveling direction such that at least one of the width end portions of the conveyor belt lies upstream in the traveling direction with respect to the width center of the conveyor belt.

Claim 16 is allowable over prior art of record because at least prior arts have not been discloses the recessed portion has a stepped portion upstream in the conveyor belt traveling direction such that the stepped portion is of an overhanging form whose upper end is oriented downstream of the traveling direction.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-Th:6:30 AM-3:00PM or IFP, Friday: work at home.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic



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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LT

June 6, 2007



**STEPHEN MEIER**  
**SUPERVISORY PATENT EXAMINER**